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**THE INFLUENCE OF SAFETY MANAGEMENT PRACTICES
ON SAFETY PARTICIPATION AMONG CONSTRUCTION
WORKERS**

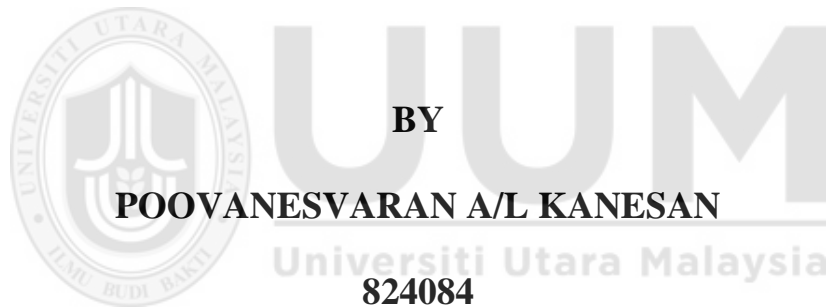
POOVANESVARAN A/L KANESAN



**MASTER OF SCIENCE
(OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT)
UNIVERSITI UTARA MALAYSIA
2020**

**THE INFLUENCE OF SAFETY MANAGEMENT PRACTICES ON
SAFETY PARTICIPATION AMONG CONSTRUCTION WORKERS**

COLLEGE OF BUSINESS UNIVERSITI UTARA MALAYSIA (UUM)



BY

POOVANESVARAN A/L KANESAN

824084

**Dissertation submitted to
School of Business, University Utara Malaysia,
In fulfillment of the requirement for Master of Science (Occupational Health
and Safety Management)**



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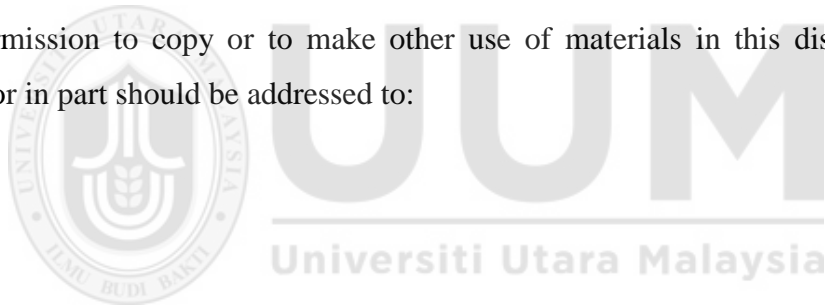
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ABSTRACT

The practice of safety management is essential in reducing the hazardous incidents in the workplace by enhancing the safety conditions within the workplace, as well as encouraging employers and employees to shift their attitudes and behaviors to place an importance on safety and health. This research, therefore, explores and evaluates the influence of participation to safety among the workers in construction company located in Pasir Gudang, Johor. This study review the relationship between safety participation as dependent variable with independent variables which are six management practices namely management commitment, safety training, the involvement of the workers, safety communication, safety rules and procedures, promotion of safety, and policies by conducting a survey using questionnaires among 200 employees. Statistical analysis was performed using SPSS version 25.0 and the result is shown that the validity and reliability of five factors of safety management practices that may affect the safety participation. The results from the survey conducted found that Management Commitment, Safety Training, Workers' Involvement, Safety rules and Procedures, Safety Promotions and policies have a high impact on the safety participation. There was significant association between the 5 hypotheses and safety participation ($p < 0.05$). The recommendation relates to improving the commitment to safety procedures, proper training for construction activities and applying reward management system in the workplace.

Keywords: management commitment, safety training, workers involvement, safety communication and feedback, safety rules and procedures, safety promotion policies, and safety participation

ABSTRAK

Amalan pengurusan keselamatan adalah penting dalam mengurangkan kejadian berbahaya di tempat kerja dengan meningkatkan persekitaran yang selamat di tempat kerja, serta menggalakkan majikan dan pekerja untuk mengubah sikap dan tingkah laku mereka untuk mengutamakan keselamatan dan kesihatan. Oleh itu, penyelidikan ini menilai pengaruh penyertaan terhadap keselamatan di kalangan pekerja di syarikat pembinaan yang terletak di Pasir Gudang, Johor. Kajian ini mengkaji hubungan antara penyertaan keselamatan sebagai pemboleh ubah bersandar dengan pemboleh ubah bebas yang merupakan enam amalan pengurusan iaitu komitmen pengurusan, latihan keselamatan, penglibatan pekerja, komunikasi keselamatan, peraturan dan prosedur keselamatan, promosi keselamatan, dan polisi dengan melakukan menggunakan soal selidik di antara 200 pekerja. Analisis statistik yang digunakan ialah SPSS versi 25.0 dan hasilnya menunjukkan bahawa kebolehpercayaan lima faktor amalan pengurusan keselamatan yang mempengaruhi penyertaan keselamatan. Hasil dari tinjauan yang dilakukan mendapati bahawa Komitmen Pengurusan, Latihan Keselamatan, Penglibatan Pekerja, Peraturan dan Prosedur Keselamatan, Promosi dan polisi Keselamatan mempunyai kesan yang tinggi terhadap penyertaan keselamatan. Terdapat hubungan yang signifikan antara 5 hipotesis dan penyertaan keselamatan ($p < 0.05$). Kajian ini dapat meningkatkan komitmen terhadap prosedur keselamatan, latihan yang tepat untuk aktiviti pembinaan dan menerapkan sistem pengurusan ganjaran di tempat kerja.

Kata kunci: komitmen pengurusan, latihan keselamatan, penyertaan pekerja, komunikasi keselamatan dan maklumbalas, peraturan dan prosedur keselamatan, dasar promosi keselamatan dan penyertaan keselamatan

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Secondly i am deeply thankful to the management of this construction company for the consent for data collection. Moreover, thousand thanks to all subjects who voluntarily participated in present study and gave their full cooperation throughout the study protocol.

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LIST OF ABBREVIATIONS

OSH	Occupational Safety and Health
ILO	International Labor Organization OSHA
1994	Occupational Safety and Health Act 1994
SOCSSO	Social Security Organization
S.O.P	Safe Operating Procedure
PPE	Personal Protective Equipment
SPSS	Statistical Package for the Social Science
JSA	Job Safety Analysis



CHAPTER 1

INTRODUCTION

1.1 Background of Study

The Malaysia construction industry is very wide-ranging industries that are facing a high occupational risk, with the workers being exposed to accidents and other hazardous situations (Idris, 2017). Occupational Safety and Health (OSH) aspect in most organizations is in place for the improvement of productivity and efficiency. The Malaysian construction market is expected to register a CAGR at 4.7% over the forecast period, 2019 – 2024. The Malaysian construction industry registered an average annual growth rate of 7.9%, during 2010-2016. Between 2016 and 2017, the average growth rate was 7.1% per year and construction industry contributed 5.9% to the GDP in 2017, while total industry growth for the year stood at 6.7% (Malaysia Construction Market, 2019).

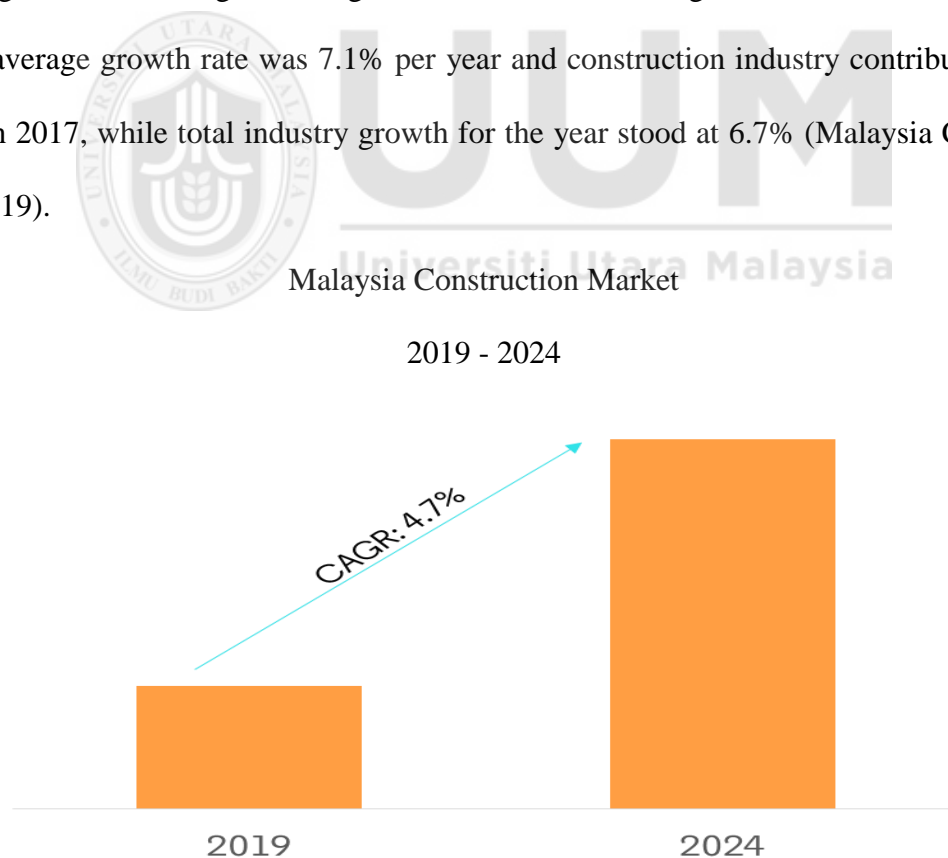


Figure 1.1

Source: Mordor Intelligence, 2019

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APPENDIX A: Questionnaire



Date : 06 / 01 / 2020

Dear Respondent,

I am a Postgraduate student in University Utara Malaysia and carrying out a survey regarding safety behaviour, in order to fulfil the degree of Master requirement of University Utara Malaysia. The objective of this research is to determine the relationship between safety management practices with safety participation.

Attached alongside this letter is a short questionnaire that addresses the element of safety management practices in your organisation alongside your safety uncertainty and safety behaviour as an employee in the same organisation. I realize that your time is priceless and very precious; however, your involvement in this survey, which will need only 10 - 15 minutes of your time, will contribute to the success of this study.

There is no right or wrong answer to the statements listed in the questionnaire. Your sincerity and honesty is highly required in answering these statements. Please be rest assured that all your responses will be kept confidential and will be strictly used for the academic research purposes only. With this I highly appreciate your cooperation and participation in this study and wish to convey my thanks in advance.

If you are interested in this study and it's outcome, please contact me via email at esvaran_4@yahoo.com or call me at 0166339014.

Thank you for your time and attention

Yours sincerely,

Poovanesvaran Kanesan

Tuan/Puan,

Saya adalah pelajar Sarjana dari Universiti Utara Malaysia yang sedang menjalankan satu kajian mengenai tingkah laku keselamatan, untuk memenuhi pra-syarat Sarjana dari Universiti Utara Malaysia. Objektif kajian ini adalah untuk menentukan hubungan antara amalan pengurusan keselamatan dengan tingkah laku keselamatan. Soal selidik yang disertakan bersama-sama dengan surat ini merangkumi elemen pengurusan keselamatan di dalam organisasi anda serta ketidakpastian mengenai keselamatan dan tingkahlaku keselamatan anda sebagai pekerja di dalam organisasi. Saya sedar bahawa masa anda sangat berharga dan bermakna; walau bagaimanapun, penglibatan anda selama 10 - 15 minit bagi menjawab soal selidik ini, akan menyumbang kepada kejayaan kajian ini.

Tidak ada jawapan yang betul atau salah dalam soal selidik ini. Hanya keikhlasan dan kejujuran anda diperlukan dalam menjawab soalan. Untuk makluman, semua maklumbalas anda akan dirahsiakan dan hanya digunakan bagi tujuan penyelidikan akademik sahaja.

Dengan ini saya sangat menghargai kerjasama dan penglibatan anda dalam kajian ini dan saya dahului dengan ucapan terima kasih.

Jika anda berminat dengan kajian ini dan dapattannya, sila hubungi saya melalui e-mel esvaran_4@yahoo.com atau menghubungi saya di talian 0166339014.

Terima kasih atas kerjasama dan perhatian anda.

QUESTIONNAIRE

Section A: Demographic Information

Please check (/) in the appropriate box or fill in the blank, where appropriate.

1. Your job title :
 - ☐ Executives
 - ☐ Supervisor
 - ☐ General worker
 - ☐ Other, please specify : _____
2. Your gender :
 - ☐ Male
 - ☐ Female
3. How long have you been working?
 - ☐ Less than 1 year
 - ☐ 1-3 years
 - ☐ 4-6 years
 - ☐ 7-9 years
 - ☐ More than 9 years
4. Age :
 - ☐ 18-30 years old
 - ☐ 31-50 years old
 - ☐ 51 and above
5. Your Highest educational level:
 - ☐ Secondary School
 - ☐ Certificate
 - ☐ Diploma
 - ☐ Degree
 - ☐ Other, please specify :
6. Marital status:
 - ☐ Married
 - ☐ Single
 - ☐ Divorced

7. Occupational accident:

- ☐ Yes
- ☐ No

8. Frequency of accident (if yes):

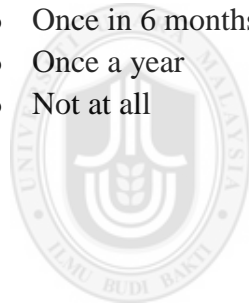
- ☐ 1-3 times
- ☐ 4-6 times
- ☐ 7-9 times
- ☐ More than 9 times

9. Safety training:

- ☐ Yes
- ☐ No

10. Frequency of safety training (if yes):

- ☐ Every month
- ☐ Once in 3 months
- ☐ Once in 6 months
- ☐ Once a year
- ☐ Not at all



UUM
Universiti Utara Malaysia

(Survey of workplace safety)

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	2	3	4	5

Section B: Management Commitment

NO	Question	Rating				
1	Management places safety above production.	1	2	3	4	5
2	Safety awareness campaign is conducted by the company.	1	2	3	4	5
3	Project leadership consider that Safety has to be constantly implemented every time and everywhere.	1	2	3	4	5
4	One of the Safety procedures is to use ergonomic and suitable machinery and equipment in the projects.	1	2	3	4	5
5	Management will update a safety routine or policy to make sure it stays relevant, purposeful and works well.	1	2	3	4	5
6	Management encourages by giving a reward based on observation of safety.	1	2	3	4	5
7	My company provides sufficient personal protective equipment's for the workers.	1	2	3	4	5

Section C: Safety training

NO	Question	Rating				
1	The company trains all employees that the words “SAFETY FIRST” have a significant meaning.	1	2	3	4	5
2	Training is provided in a manner (e.g., classroom, on the job, required reading, briefing) that helps me understand how to apply safety principles and controls to my work.	1	2	3	4	5
3	We have received the training necessary to perform our jobs.	1	2	3	4	5
4	The company's safety training gives penalty to people who not wearing protective gear at the workplace.	1	2	3	4	5
5	The training I receive meets my expectations about safety.	1	2	3	4	5
6	The company's safety training is that all employees get trained in safe work procedures for their jobs.	1	2	3	4	5

Section D: Workers Involvement

NO	Question	Rating				
1	Management promotes employees involvement in safety related matters.	1	2	3	4	5
2	My company has safety committees consisting of representatives of management and employees.	1	2	3	4	5
3	When I am at work, I am always thinking about safety and making sure what I'm doing is safe.	1	2	3	4	5
4	Safety is our top priority when we are completing work tasks.	1	2	3	4	5
5	I feel comfortable telling management if I feel like my work space is an unsafe work environment.	1	2	3	4	5
6	Management always welcomes opinion from employees before making final decisions on safety related matters.	1	2	3	4	5

Section E: Safety Communication and Feedback

NO	Question	Rating				
1	In management meetings Feedback on safety is very important.	1	2	3	4	5
2	During management meetings' agenda, safety discussion comes first.	1	2	3	4	5
3	Safety communications are a part of my daily work activities.	1	2	3	4	5
4	When a safety problem is found, management addresses the problem in a timely manner.	1	2	3	4	5
5	Management listens carefully to all who have been involved in an accident.	1	2	3	4	5
6	Management talks to the employees involved when gathering information about an accident.	1	2	3	4	5
7	After an accident, management performs an investigation that includes collecting all the necessary information.	1	2	3	4	5
8	We communicate with others in our work group to ensure safety is emphasized.	1	2	3	4	5

Section F: Safety Rules and Procedures

NO	Question	Rating				
1	I know how to perform my job in a safe manner	1	2	3	4	5
2	I know how to use safety equipment's and standard work procedures.	1	2	3	4	5
3	I know how to maintain or improve workplace health and safety	1	2	3	4	5
4	I know how to reduce the risk of accidents and incidents in the workplace	1	2	3	4	5
5	I know what are the hazards associated with my jobs and the necessary precautions to be taken while doing my job.	1	2	3	4	5

Section G: Safety Promotion Policies

NO	Question	Rating				
1	In my company safe conduct is considered as a positive factor for job promotions.	1	2	3	4	5
2	In my company employees are rewarded for reporting safety hazards (thanked, cash or other rewards, recognition in newsletter, etc.)	1	2	3	4	5
3	In my company safety week celebration and other safety promotional activities arranged by the management are very effective in creating safety awareness among the workers.	1	2	3	4	5
4	There exists very healthy competition among the employees to find out and report unsafe condition and acts	1	2	3	4	5
5	Our supervisor becomes very unhappy and angry when employees find out and report unsafe conditions and acts in our section	1	2	3	4	5

Section H: Safety Participation

NO	Question	Rating				
1	I put extra effort to improve the safety of the workplace.	1	2	3	4	5
2	I always point out to the management if any safety related matters are noticed in my company.	1	2	3	4	5
3	I voluntarily carryout tasks or activities that help to improve workplace safety.	1	2	3	4	5
4	I encourage my co-workers to work safely.	1	2	3	4	5
5	I help my co-workers when they are working under risky or hazardous condition	1	2	3	4	5

APPENDIX B: Turnitin Result

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APPENDIX C: Descriptive Result

Descriptive Statistics for Main Variables

Variables	Mean	Std. deviation	N
Management Commitment	3.8731	.73722	200
Safety Training	4.0416	.65385	200
Workers Involvement	4.3766	.49950	200
Safety Communication	3.9280	.65113	200
Safety Rules and Procedures	3.9340	.56200	200
Safety Promotion and Policies	3.8280	.79200	200
Safety Participation	3.9480	.61362	200

Descriptive Statistics

	N	Mean	Std. Deviation
B1	200	4.0000	.77200
B2	200	4.3000	.76000
B3	200	3.8000	.68000
B4	200	3.7000	.76000
B5	200	3.7000	.76890
B6	200	4.2000	.56000
B7	200	3.4120	.85965
C1	200	3.9200	.67000
C2	200	3.7800	.44000
C3	200	3.6600	.67000
C4	200	4.1200	.56000
C5	200	4.3300	.77100

C6	200	4.4400	.81210
D1	200	4.4000	.86500
D2	200	3.9000	.61000
D3	200	4.1200	.45000
D4	200	4.3200	.43200
D5	200	4.6700	.32000
D6	200	4.8500	.32000
E1	200	4.3000	.67400
E2	200	4.4000	.76500
E3	200	4.5000	.56000
E4	200	4.2000	.54000
E5	200	3.7600	.44000
E6	200	3.5000	.58000
E7	200	3.3300	.77000
E8	200	3.4400	.88000
F1	200	3.5600	.55000
F2	200	4.4300	.78000
F3	200	4.1200	.42000
F4	200	3.6700	.38000
F5	200	3.8900	.68000
G1	200	3.9900	.77000
G2	200	4.3100	.88000
G3	200	4.2500	.98000
G4	200	3.2400	.67000
G5	200	3.3500	.66000
H1	200	3.3300	.77000
H2	200	2.4500	.55000
H3	200	4.4500	.51000
H4	200	4.7000	.51000
H5	200	4.8100	.66000
Valid N (listwise)	200		

APPENDIX D: Reliability Result

Reliability Analysis

Variables	Number of Initial Items (Pilot Test)	Cronbach's alpha (Pilot Test)	Number of Items	Cronbach's alpha
Management Commitment	7	0.673	7	0.679
Safety Training	6	0.845	6	0.712
Workers Involvement	6	0.682	6	0.750
Safety Communication	8	0.731	8	0.775
Safety Rules and Procedures	5	0.757	5	0.684
Safety Promotion and Policies	5	0.468	5	0.675
Safety Participation	5	0.582	5	0.793
Total	42		42	

APPENDIX E: Correlation Result

		MANAGEMENT COMMITMENT	SAFETY TRAINING	WORKERS INVOLVEMENT	SAFETY COMMUNICATION	SAFETY RULES AND PROCEDURES	SAFETY PROMOTION & POLICIES	SAFETY PARTICIPATION
MANAGEMENT COMMITMENT	PEARSON CORRELATIONSHIPS	1						
	SIG (2 TAILED)	-						
	N	200						
SAFETY TRAINING	PEARSON CORRELATIONSHIPS	.421**	1					
	SIG (2 TAILED)	.000	-					
	N	200	200					
WORKERS INVOLVEMENT	PEARSON CORRELATIONSHIPS	.391**	.663**	1				
	SIG (2 TAILED)	.000	.000	-				
	N	200	200	200				
SAFETY COMMUNICATION	PEARSON CORRELATIONSHIPS	.298**	.297**	.653**	1			
	SIG (2 TAILED)	.001	.001	.000	-			
	N	200	200	200	200			
SAFETY RULES AND PROCEDURES	PEARSON CORRELATIONSHIPS	.191*	.177**	.513**	.627**	1		
	SIG (2 TAILED)	.000	.000	.000	.000	-		
	N	200	200	200	200	200		
SAFETY PROMOTION & POLICIES	PEARSON CORRELATIONSHIPS	.978**	.331**	.327**	.245**	.149**	1	
	SIG (2 TAILED)	.000	.000	.000	.000	.000	-	
	N	200	200	200	200	200	200	
SAFETY PARTICIPATION	PEARSON CORRELATIONSHIPS	.787**	.661**	.551**	.321**	.671**	.221**	1
	SIG (2 TAILED)	.000	.000	.000	.052	.000	.000	-
	N	200	200	200	200	200	200	200

APPENDIX F: Regression Result

		Coefficients^a		Standardized Coefficients Beta	t	Sig.
Model		Unstandardized Coefficients B	Std. Error			
1	(Constant)	.287	.341		-.739	.461
	Management_Commitment	.672	.079	.333	7.438	.030
	Safety_Training	.564	.065	.465	6.656	.023
	Workers_Involvement	.477	.044	.587	7.234	.000
	Safety_Communication	.165	.474	.634	-.341	.679
	SafetyRules_Procedures	.876	.083	.376	5.454	.012
	SafetyPromotions_Policies	.632	.087	.432	4.897	.018

a. Dependent Variable: Safety Participation

